Complete Summary

GUIDELINE TITLE

Hypertensive disorders of pregnancy: pre-eclampsia, eclampsia.

BIBLIOGRAPHIC SOURCE(S)

Hypertensive disorders of pregnancy: pre-eclampsia, eclampsia. Philadelphia (PA): Intracorp; 2005. Various p. [20 references]

GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from July 1, 2005 to July 1, 2007.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Pre-eclampsia
- Eclampsia

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology

INTENDED USERS

Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Utilization Management

GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, management, and treatment of hypertensive disorders of pregnancy that will assist medical management leaders to make appropriate benefit coverage determinations

TARGET POPULATION

Pregnant women diagnosed with or at risk for developing pre-eclampsia and eclampsia

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Physical examination and assessment of signs and symptoms
2. Diagnostic tests
    - Blood pressure screening
    - Urinalysis
    - Blood studies
    - Liver studies
    - Ultrasound
    - Non-stress test
    - Stress test
    - Biophysical profile

Management/Treatment

Chronic and Transient Hypertension

1. Antihypertensive agents

Pre-eclampsia

1. Prompt delivery for term gestation or pre-term gestation if fetal lung maturity has been documented by amniocentesis

2. Hospitalization and close monitoring for severe pre-eclampsia without evidence of imminent deterioration and gestation of less than 34 weeks
3. Outpatient management with close follow-up for mild pre-eclampsia including
    - Bed rest
    - Antihypertensive drugs
    - Anticonvulsant prophylaxis
4. Postpartum care

Note: The following treatment measures were considered but not recommended: salt restriction, daily calcium supplementation, low-dose aspirin therapy, diuretics, angiotensin-converting enzyme inhibitors

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Diagnostic Confirmation

Subjective Findings

- Headache
- Dizziness
- Tinnitus
- Drowsiness
- Visual abnormalities
- Nausea
- Vomiting (see the Intracorp guideline Hyperemesis Gravidarum)
- Epigastric pain
- Swelling of the hands and feet

Objective Findings

- Criteria for pre-eclampsia (see Description section in the original guideline document)
- Diastolic blood pressure greater than 90 mm Hg
- Systolic blood pressure greater than 140 mm Hg
- May still have pre-eclampsia if systolic blood pressure raises 30 points above baseline or diastolic blood pressure raises 15 points above baseline.
- Protein in urine
- Edema, especially in face and hands
- Hyperreflexia
- Blindness
- Altered state of arousal
- Change in respiratory rate
- Tachycardia
- Hepatic enlargement and tenderness
- Oliguria or anuria
- Proteinuria of greater than 5 g/24 hours or 100 mg/dL on a spot urine
- Hyperuricemia (>5 mg/dL)
- Thrombocytopenia
- Increased lactate dehydrogenase
- Increased liver transaminases
- Increased serum creatinine
- Increased or decreased hematocrit
- Hypoalbuminemia
- Elevated fibrin degradation products
- Prolonged prothrombin time (PT) and partial thromboplastin time (PTT)

Diagnostic Tests

- Blood pressure screening
- Urinalysis
- Blood studies
- Liver studies
- Ultrasound
- Non-stress test
- Stress test
- Biophysical profile

Differential Diagnosis

- Viral hepatitis
- Acute fatty liver of pregnancy
- Acute pancreatitis
- Gallbladder disease
- Appendicitis
- Renal calculi (kidney stones)
- Glomerulonephritis
- Hemolytic-uremic syndrome
- Exacerbation of systemic lupus erythematous
- Autoimmune thrombocytopenic purpura
- Cerebral venal thrombosis
- Encephalitis of various causes
- Cerebral hemorrhage

Treatment

Treatment Options

Chronic and Transient Hypertension

- Antihypertensive agents: methyldopa, labetalol, nifedipine (diuretics are relatively contraindicated since they decrease plasma volume and may be detrimental to fetal growth. Angiotensin-converting enzyme [ACE] inhibitors are contraindicated because they are associated with numerous adverse effects to the fetus. Salt restriction also decreases plasma volume and thus is not recommended).
- Daily calcium supplementation has not been shown to prevent pre-eclampsia and, therefore, is not recommended.

Pre-eclampsia

- Note: At this point in time there is still no conclusive evidence to support the efficacy of low-dose aspirin therapy for the treatment or prevention of pre-eclampsia.
- Prompt delivery is indicated for term gestations or pre-term gestations in which fetal lung maturity has been documented by amniocentesis. This is the only intervention that will cause the blood pressure to return to baseline.
- Prompt delivery is indicated when there is imminent eclampsia, multi-organ dysfunction, fetal distress, or the gestation is past 34 weeks.
- Hospitalization and close monitoring is recommended for severe pre-eclampsia without evidence of imminent deterioration and a gestation of less than 34 weeks.
- Outpatient management with close follow-up is adequate for mild pre-eclampsia, but agreement about treatment is lacking; treatment options include:
    - Bed rest
    - Antihypertensive drugs
    - Anticonvulsant prophylaxis

Duration of Medical Treatment

- Medical - Optimal: 3 day(s), Maximal: 180 day(s)

- The treatment should continue through routine postpartum care.

Additional provider information regarding primary care visit schedules, referral options, and specialty care are provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration, and return to work goals, including

- Resolving mild pre-eclampsia without hospitalization
- After hospitalization for pre-eclampsia

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis, management, and treatment of hypertensive-disorders of pregnancy that assist medical management leaders to make appropriate benefit coverage determinations

POTENTIAL HARMS

Not stated

CONTRAINDICATIONS

CONTRAINDICATIONS

Diuretics are relatively contraindicated in pregnancy since they decrease plasma volume and may be detrimental to fetal growth. Angiotensin-converting enzyme (ACE) inhibitors are contraindicated because they are associated with numerous adverse effects to the fetus. Salt restriction also decreases plasma volume and thus is not recommended.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Timeliness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Hypertensive disorders of pregnancy: pre-eclampsia, eclampsia. Philadelphia (PA): Intracorp; 2005. Various p. [20 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005

GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

SOURCE(S) OF FUNDING

Intracorp

GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)
Intracorp Disability Clinical Advisory Team (DCAT)
Medical Technology Assessment Committee (MTAC)
Intracorp Guideline Quality Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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Reprints of complete guideline content may be purchased for $35.00 per title (plus tax in TX at 8.25% and CT at 1.0%). Please send e-mail request to lbowman@mail.intracorp.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.
- Online guideline user trial. Register for Claims Toolbox access at www.intracorp.com.

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: lbowman@mail.intracorp.com.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on August 18, 2005. The information was verified by the guideline developer on September 2, 2005.

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Date Modified: 10/2/2006